

573

PROCEEDINGS  
OF THE  
ASIATIC SOCIETY OF BENGAL,  
FOR NOVEMBER, 1864.



The Monthly General Meeting of the Asiatic Society of Bengal was held on the 2nd instant.

Baboo Rajendralal Mitra, Vice President, in the Chair.

The Proceedings of the last meeting were read and confirmed.

Presentations were announced—

1. From Baboo Rajendra Mullick, a young Emu, and a mounted specimen of a crown pigeon.

2. From L. B. Bowring, Esq., a photograph of an Inscription on a rock at Taikal.

The following letter accompanied the presentation:—

“BANGALORE, 17TH SEPTEMBER, 1864.

“MY DEAR SIR,—I have the pleasure to send you a photograph of a curious rock inscription at Taikal, a few miles from the Colar Road Station of the Bangalore Branch Railway. It is in Teloogoo, which is the prevailing language in the Colar District of Mysore; but it has been deciphered with difficulty, and the translation given overleaf is rather the general purport than a literal rendering.

“At the time mentioned, 1438 Saliváhan, the Colar country was apparently under the rule of the Anagundi kings, and it is probable that the Deva Raja referred to in the inscription was of that Dynasty.

“Yours truly,

(Signed) “L. B. BOWRING.”

## TRANSLATION.

“The order of Deva Raya, the chief ruler, to his next in authority Gopa Raja, son of Kanthappa Raja Wodiar, dated 1438.

Banda Baliaka Naik.

Allarpa Naik.

Bhungeeda Naik.

“These three are counsellors of the said Gopa Raja, their household god being Vardharaj Devaru; they conducted their domestic affairs in the form of a procession in the service of that god.

“At this time it was reported that a tiger had killed a cow in the vicinity. Then a hero, named Pratap Singh, visited Gopa Raja, with his followers, during the procession in honor of the god. At the request of Gopa Raja, he hunted and slew the tiger, for which service Deva Raya, on the recommendation of Gopa Raja, granted to the said Pratap Singh, in the name of the god, 93 wet lands and 13 dry lands near the village of Coomsee.”

Under the figure of a Tiger:—

“This shásanam is engraved by Kallukote Tirumallaga. 93 wet lands and 13 dry lands have been granted for slaying the tiger by order of Deva Raya. The said wet and dry lands have been obtained by the favor of Vardharáj Devaru.”

3. From J. Beames, Esq., two silver and four copper coins.

4. From C. A. Elliott, Esq., Rubbings of Inscriptions at the foot of some Jain Images in the Hoshungabad district.

Mr. Blanford exhibited some specimens of flint implements of the “early stone period,” found at St. Acheul, near Abbeville, which he had lately received from England. He pointed out the resemblance of their general form to that of the stone implements from Madras exhibited a few months since by Mr. Oldham, and gave a brief description of the deposits in which these implements were found. He specially pointed out that the evidence of the immense antiquity of man rested not on mere vague calculations of the rate at which alluvial deposits were formed, as had been recently stated, somewhat dogmatically, by an eminent mathematician, who was evidently but slightly informed on the enormous changes that have been effected in the physical Geography of Western Europe since the formation of the deposits in which these implements were found. To suppose that the

Somme Valley had been hollowed out in a period of six thousand years, or even six thousand years two or three times multiplied, would be utterly at variance with all that we know of the eroding action of rivers; and the Somme Valley only offered one instance out of a great number in which broad river valleys must have been formed since man lived on the earth. Some persons without practical acquaintance with the forms of stones naturally fractured, had doubted whether the flint implements were really of human manufacture, in spite of all the evidence of design afforded by their uniformity, and the number of fractures by which that uniformity had been attained; and the absence of human bones from the deposits containing the flint implements had been much commented on, as being adverse to the view of the human origin of the flint knives. It might be satisfactory, therefore, to such persons to know, that within the last few months a considerable number of human bones, including a human skull of very depressed form, a sacrum, portions of jaws and other bones, had been disinterred from the old flint-knife gravels of Moulin Quignon, not by the questionable agency of workmen, but by M. Boucher des Perthes and a number of French Geologists, whose names were a sufficient guarantee for the genuineness of the discovery. Mr. Blanford concluded by reading a paragraph from the August number of the *Annals and Magazine of Natural History*, which gave an account of these discoveries.

Mr. Blanford then drew the attention of the Meeting to some portions of a semi-fossil human skull, found some years since, unlabelled and without any note of locality, in the Society's Museum. It consisted of the occipital and parietal bones and a portion of the frontal, with portions of upper and lower jaws, and was filled with a mass of shells of the genus *Unio*, also semifossilized, and loosely connected together by calcareous infiltration, in a sandy matrix. The *Unio* was of a living species, but that fact would afford no indication of age, as the fresh water shells which accompany the bones of extinct Mammalia in the Nerbudda alluvium are all of living species. Mr. W. Theobald had found this specimen some years ago in the Museum, shortly after his return from the Nerbudda Valley, and then stated that the matrix of the specimen resembled that of certain of the Nerbudda bone deposits. The specimen had been laid by, and had

only been refound lately after much search. Mr. Blanford now exhibited it to the Meeting, in the hope that some of the older Members of the Society might be enabled to throw some light on its history. The skull, so far as could be judged from the fragments preserved, was well formed, and not unlike that of some of the recent native skulls in the Society's Museum. Until something was known of its history, no inference could be drawn as to its antiquity.

Mr. Blanford then read to the Meeting a note by Professor John Phillips, of Oxford, on the supposed Spiti fossils in the Oxford Museum, prefacing the reading with the following remarks:—

“It will be remembered by those Members who were present at the December Meeting of the Society last year, that Mr. Oldham read a paper ‘on the reputed Spiti fossils,’ in the Society's Museum, in which I was called to account for having rejected on insufficient grounds the genuineness of certain of the fossils in that collection, more especially a few species of Ammonites which differed from those forming the majority of the collection in apparent geologic age, as well as in matrix, &c.; while they were absolutely identical in species, matrix, and every other point with the well known Lias fossils from Whitby in Yorkshire. Some of them were figured as forming part of Dr. Gerard's Spiti collection, by Mr. James Prinsep, in the *Gleanings in Science* of 1831, and again in the 18th vol. of the *Asiatic Researches*; but as this was the only evidence that I could discover of their genuineness, and as similar fossils had not been discovered by any other collectors in Spiti or elsewhere in the North Himalaya, I considered it probable that the specimens in question had been accidentally intermixed with the genuine Spiti fossils subsequent to the receipt of the latter by the Society. Mr. Oldham endeavoured to combat this view by adducing the fact that fossils of the same species and similar in character to those rejected by me existed in the Oxford Museum, where they were labelled as Spiti fossils; and that it was absurd to suppose that a similar accidental intermixture of Whitby and Spiti fossils had taken place at Oxford and Calcutta.

“In replying to Mr. Oldham's remarks, I pointed out that the Oxford specimens could not be received as independent evidence, unless it could be *proved* that they had been despatched by Dr. Gerard to England as an independent series, and under circumstances which

rendered it impossible that the supposed intermixture had been effected prior to their despatch. Admitting the fact that the Oxford fossils had been received in England some time previous to the publication of the 18th Volume of the Asiatic Researches, I stated that I had been unable to find any record of the date of the actual receipt of the fossils by Dr. Buckland, or of that of the Society's series by the Society. If these two dates could be ascertained and compared, it would then be seen whether the evidence of the Oxford fossils could be regarded as that of an independent series or not. I asked Dr. Oldham whether he had any such dates, to which he did not reply at the time, but afterwards rose and said that he had not his notes with him, but that he knew that the Oxford series was received at Oxford before the Asiatic Society had received theirs. Thinking, however, that Dr. Oldham might possibly be mistaken on this head, and with a view, if possible, to settle this very important point of evidence, I wrote to Professor Maskelyne, to ask him to ascertain whether there existed any record of the actual date of receipt of the Spiti fossils at Oxford, and briefly stating the question at issue, which that date was required to decide. Professor Maskelyne very kindly communicated my letter to Professor John Phillips, and the result is the note which I now read to the society.

“ ‘Notes on Himalayan Fossils in the Museum at Oxford; June 2nd, 1864. By Prof. John Phillips.

‘About 30 years since, I sent from York to Calcutta a considerable series of the fossils of Whitby and some other tracts. The specimens were selected from the duplicates of the Yorkshire Philosophical Society, and were presented by that Institution to some individual of position in Calcutta, whose name I cannot remember (it seems to me to have been Patterson), but could find out. Whether the collection was carefully kept separate at Calcutta, I know not; but some years afterwards, on being shown in England a specimen of *A. communis* said to be ‘from the Himalaya,’ I at once conjectured that the Yorkshire collection might have given forth this offset so like—so absolutely like—in form, colour, and accompaniments of shale or ironstone. The same astonishing resemblance occurs in regard to these specimens in the Oxford Museum, especially in regard to the *Ammonites communis* and *A. bifrons (Walcottii)*, which are very common at Whitby.

‘On the other hand, the other fossils in this collection do not offer any especial analogy to Yorkshire types; some are of Oxfordian shapes, and of the Belemnite in particular, it is unknown in Yorkshire, but a good deal like some found in the South of England, as to form, not, I think, as to conservation, &c.

‘Among the fossils we note as of Liassic age, *Ammonites communis*.

‘*Ammonites Bifrons (Walcottii)*: such occur at Whitby. The variety of *A. communis* called *crassus*, is found both at Whitby, and in this series, from the Himalaya!

‘*Pachyodon Listeri* in plenty. It is not quite like ordinary English specimens.

‘Small *Spirifera* of the Liassic type, such as occurs in South of England, not in Yorkshire.

‘With this *Spirifera* in plenty, occurs:—

‘*Rhynchonella* of the types *concinna* and *obsoleta*.

In separate masses, —

‘*Avicula* like *Braamburiensis*.

‘*Astarte*.

‘*Trigonia* of a type near middle and top of Bath Oolite series, not quite like any English form, and separate.

‘*Belemnites* of the group *B. Sulcatus*, Miller, probably of Oxford clay.

‘Palæozoic Fossils also occur, including

‘*Producta antiquata*.

‘*Spirifer* 1.

” 2.

” 3. ‘*Attenuata*

‘*Strophomena*.

(Sd.) ‘JOHN PHILLIPS,

Oxford.

‘2nd June 1864.’

“It would appear from this note, that Professor Phillips entertains some doubt on the genuineness of the Oxford fossils, but as he omits to give the date, which is especially required to settle the question, I am still uncertain whether any record of it exists. Dr. Oldham has, however, given us to understand, that he possesses such evidence of the dates both of the receipt of the Society’s and of the Oxford collec-

tions, as will tend to settle the point, and it will materially aid in the elucidation of the question if Dr. Oldham will communicate these, for record in the Society's proceedings, in order that their authenticity may be thoroughly sifted, and the question of genuineness, if possible, thereby set at rest."

Babu Rajendralal Mitra made the following remarks on four undescribed coins, which were exhibited by him.

"Since the last meeting, I have had occasion twice to examine the Cooch Behar trove at the Mint, in order to select a few sets of coins for a friend; and while so employed, I discovered two varieties of coins, which had before escaped my notice. Both of them appear to me to be unknown to numismatologists. I take this opportunity, therefore, to submit them to the inspection of the meeting: one of them has on the obverse the name of one Sultan Ruknuddin Kaikaus, the son of a Sultan, and the grandson of a Sultan; and on the reverse, that of the Khalif Mostasim. The margin of none of the four specimens that I have seen is perfect, but on one of them the words *Sulsh* and *Satamáyá*, or "six hundred and three," are distinct, with a word in the middle, which appears to me to be very like *Tasaayin* or ninety. On a second, the words *Saneh ahad*, "In the year one," are clearly legible, and traces exist of *Tasaayin Satamáyá*. The third specimen has *Tasaayin* or "ninety," the rest being illegible. Reading the dates with the help of each other, I take them to be 691 and 693 respectively. The place of coinage, I read with some doubt to be *Sonargaon*. It follows hence, that the king who issued these coins must have lived in the last decade of the 7th century, and exercised sway either at Delhi or Gour. Now it is well known that Nasiruddin Bagora, the second son of Balban, was in undisputed possession of Bengal from the Hejira year 681 to 698, or A. D. 1282 to 1299; and our Kaikaus, therefore, could not have been a King of Bengal at that time. At Delhi, Ghyasuddin Balban died in the year 1286, leaving his Empire to his grandson, Kai Khusro, son of Muhammad. But his nobles set aside his will, and raised another of his grandsons, Kaikobad, son of Nasiruddin of Bengal, to the throne. That dissolute prince reigned for only three years, and was succeeded by Jellaluddin Firuz, the Khilji, in H. 687, or A. D. 1288. Ziaa-i-Barni, the historian and contemporary of this Firuz, says, that during the last illness of Kaiko-

bad his Moghal Omrahs got possession of his only son Kaimurs, a boy of three years of age, and proclaimed him King under the title of Shamsuddin. They were, however, unable to maintain their ground, and in three months Firuz mounted the throne, and subsequently caused the young prince to be put to death. This statement has been repeated by all subsequent historians, except the author of the *Mirat al'Alum*, who, according to Mr. Thomas, changes the name of the prince, from Kaimurs to Kaikaus; and it is to this prince that I feel disposed to assign the coin under notice. Its shape, size, and style of writing are very like those of the coins of Kaikobad, its legend is *mutatis mutandis* the counterpart of that of the other, and its reverse has the name of the Khalif Mostásim, given in identically the same words, as on the coins of Balban and Kaikobad, while there is a strong family likeness in the names of Kaikaus, Kaimurs, Kaikobad and Kai Khusro.

The dates of the coins, however, are opposed to this assignment. The units "one" and "three," are perfectly clear, and they will not admit of our bringing the coins which bear them to the year 687, when Kaimurs was proclaimed king, even if we doubted the term for 90 (*Sasayin*) and read it 80 (*Samanin*.) The title also is opposed to my assignment. According to a contemporary historian, the prenomens of Kaimurs was Shamsuddin, while that of the Kaikaus of our coin is Ruknuddin. These difficulties, however, may be explained away. There are on record several instances in which Muhammadan Sovereigns have appeared under different prenomens at different times, and this may be one of them; and the discrepancy in the dates may be due either to the prince having lived as a fugitive much longer than Ziaa-i-Barni admits, or to a desire on the part of Nasiruddin, Governor of Bengal, to continue his allegiance to his grand son Kaimurs, even after his deposition, and possibly after his death; for he could not readily recognize the usurpation by Firuz of an empire which belonged to his family for three generations. Should this theory of mine be untenable, it will be for others to decide who this prince was, whose coin we have now on hand.

OBV. "Ul Sultan ul A'zam Ruknuddunia-o-din Abu Mozaffar Kaikaus Sultan ibn ul Sultan ibn Sultan." REV. "Ul imam ul Mustásim, Amir ul momnin Maz Zarb házeh ulsikka Saneh suls tasaayin satamaya."



The second coin I have to notice, has the name of one Ali Shah on the obverse. His prenomen was Alauddin, and he calls himself the Alexander of his age, *Sekander uljeman*; I have found several specimens of his coinage, but none sufficiently perfect to give me his date in full. The only word legible is *Sabaamaya*, or "seven hundred." Traces also are visible of a word which may be taken for *arbayin*, or forty, but what the unit was I cannot make out. The place of coinage was Lucknouty. Assuming upon those premises that it is a Bengal coin of the 5th decade of the 7th century, I attribute it to Aly Mubarik, the officer of Kaddar Khan, who proclaimed himself king of Bengal, in 742 Hejira, or A. D. 1342, under the prenomen of Alauddin. He was assassinated, after a reign of a year and five months by his foster brother Hajy Ilias.

The legend on the coin is as follows:—OBV. "Ul Sultan ul Azam Ala ul dunia-o-din Abul Mozaffar Ali Shah ul Sultan." REV. "Sekander ul jeman ul \*\*\* zarb ul Sikka Lakhnauti, Saneh Arbayin \* Sabamaya."

I take this opportunity to exhibit two Assam silver coins, placed at my disposal by Col. Guthrie. They bear the names of Surjanaráyana Deva and Surja Deva Chakradhvaja Sinha, with the Saka years 1570, 1575, or A. D. 1648 and 1653. They were the earliest Hindu Kings of Assam, but their dates had hitherto remained unsettled. James Prinsep, following the *Assam Burunji* of Holiráma Dhekial Fukan, placed the first Hindu King of Assam, Chakam or Jayadhvaja Sinha, in the year 1665, with a mark of interrogation after it, and a Chakradhvaja Sinha in 1621, immediately below him.

The *Assam Burunji* of Rádhanátha Bor Borua removes Chuhung alias Surjanaráyana the first Hindu Raja, to the year 1497; and then, after two Burmese names, has a Chuhingfa, alias Surjanarayana, who after two Burmese successors was followed by a Chutamla, alias Jayadhvaja Sinha, in 1658, and a Chupangmung, alias Chakradhvaja, in 1663. Chakam, alias Jayadhvaja Sinha, is said to have defeated a general of Aurungzeb, and his era, therefore, must be subsequent to 1658, and he is evidently identical with the Surjadeva Chakradhvaja Sinha of our coin, who commenced his reign before 1653. His immediate predecessor was Surjanaráyana, who was probably the first convert to Hindu faith; for the first prince of that name in Rádhá-

nátha's history is evidently a mistake. In his coins he invokes both Hari and Hara for his patron divinities.

The legends of the two coins, are, 1st, of Surjanáráyana.

1ST AREA.—Sri Sri Hari Haracharana paráyanasya.

2ND AREA.—Sri Sri Surjanáráyana Devasya Sáke 1570.

2nd, of Surjadeva.

1ST AREA.—Sri Sri Siva Rámagana paráyanasya.

2ND AREA.—Sri Sri Surjadeva Chakradhvaja Sinhasya Sáke 1575.

A letter from Mr. Carlyle, announcing his resignation of the Curatorship, after the Dussehra holidays, which has been accepted by the Council, was recorded.

The following resolution was proposed by the Council, expressive of the Society's recognition of Mr. Blyth's services:—

“On the eve of transferring the Zoological collections of the Society to Government, to form the nucleus of an Imperial Museum of Natural History, the Society wishes to record its sense of the important services rendered by its late Curator, Mr. Blyth, in the formation of those collections. In the period of 22 years, during which Mr. Blyth was Curator of the Society's Museum, he has formed a large and valuable series of specimens, richly illustrative of the Ornithology of India and the Burmese Peninsula, and has added largely to the Mammalian, and other vertebrate collections of the Museum; while by his numerous descriptive papers, and catalogues of the Museum specimens, he has made the materials thus amassed by him subservient to Zoological science at large, and especially valuable to those engaged in the study of the vertebrate faunas of India and its adjoining countries.”

The resolution, being put to the vote, was carried unanimously.

Letters from the Rev. J. Cave Browne, Lt. Col. A. Fraser, and Mr. T. Dickens, intimating their desire to withdraw from the Society, were recorded.

The following gentlemen, duly proposed at the last meeting were balloted for, and elected Ordinary Members:—

Baboo Bhoodeb Mookerjee,

H. H. Locke, Esq.

The Hon'ble J. B. Phear.

Lieut. Col W. D. Short, R. E.

C. W. Hatton, Esq.

The following gentlemen were named for ballot, as ordinary members at the next meeting.

W. Anderson, Esq., proposed by Captain W. N. Lees, seconded by Mr. H. F. Blanford.

H. Dunlop, Esq., proposed by Captain W. N. Lees, seconded by Mr. Geoghegan.

J. C. Sarkies, Esq., proposed by Mr. Woodrow, seconded by Mr. H. F. Blanford.

D. R. Onslow, Esq., proposed by Mr. Sandeman, seconded by Mr. H. F. Blanford.

J. H. A. Branson, Esq., proposed by Mr. Heeley, seconded by Mr. Wheeler.

Whitley Stokes, Esq., proposed by Mr. H. B. Medlicott, seconded by Mr. Heeley.

R. J. Richardson, Esq., C. S., proposed by Mr. H. F. Blanford, seconded by Mr. Heeley.

E. S. Robertson, Esq., C. S., proposed by Mr. Heeley, seconded by Dr. Colles.

E. T. Atkinson, Esq., C. S., Jaunpore, proposed by Mr. Heeley, seconded by Mr. H. F. Blanford.

The Council reported that they had elected Colonel C. Douglas to the Meteorological and Library Committees.

Communications were received :—

1. From E. Thomas, Esq., A continuation of his paper on Ancient Indian Weights.

2. From Baboo Gopee Nath Sen, Abstract of the results of the Hourly Meteorological Observations, taken at the Surveyor General's Office in July and August 1864.

3. From the Secretary Antiquarian Association of the Central provinces :—

I. A Memorandum on some of the principal Hill Tribes of the Satpoora Range.

II. Notes on the Gurjat State of Patna, by Major H. B. Impey, Deputy Commissioner of Sumbulpore.

III. A letter from the Officiating Deputy Commissioner of Belaspore to the Commissioner of the Chuttesgurh Division, containing a History of the Hey Hey Bunsee Dynasty of Rüttenpore.

4. From Captain H. H. Godwin-Austen, F. R. G. S., description of a mystery play as performed in Ladak, Zaskar, &c.

The Librarian submitted a report of the accessions to the Library since the meeting held in July last.

Captain Godwin-Austen's paper was read by the Secretary. He stated that mystery plays were enacted in the principal monasteries of Ladak, in the spring and autumn of each year. He saw the performance in the monastery of Hinnis, situated in a ravine opening on the Indus, a day's journey above Leh. Captain Austen describes the monastery and its furniture at some detail, and proceeds to analyse the performance, which commenced with a dance to music of masked figures, in an extraordinary costume, with the device of a skull upon the breast; each dancer also held a ladle, made of a human skull, with long streamers of silk attached to it. To this succeeded other dances, the masks being frequently changed; one set had the third eye in the centre of the forehead, which is the mark of a deity; others were jesters or harlequins; others represented the Court of Indra; and the scene closed with a "dance of death," the performers in which were got up to represent skeletons. Captain Austen's paper was illustrated by stereoscopic views of the various *tableaux*, taken by Captain A. B. Melville, and which had been previously exhibited to the Society, and was accompanied by a translation of a MS. obtained in Ladak, and furnishing directions to dancers.

Captain Lees said,—“I was asked a question at our last meeting by the Hon'ble George Campbell, whose attention had been attracted by the following passage in Purchas' travels in India during the reign of Akbar:—

“‘In his Treasurie of Agra are in gold of Seraffins Echeber (which are ten Rupias a piece) three score Leckes. Of another sort, which are one thousand Rupias each, twentie thousand pieces; and ten thousand of another sort, halfe the value. Of Toles (euery tole is a Rupia of siluer, and ten of those toles is the value of one of gold) thirtie thousand. Of another sort of ten toles, five and twentie thousand; of another sort of five toles, fiftie thousand.’

“The learned gentleman wished to know, with reference to the proposed introduction of a gold currency into India, whether the coin here alluded to under the name *Seraffin*, the value of which would

appear to have been Rs. 10-0-0, could have been the original of our English Sovereign. At the time, I stated that no value could be placed on any deductions made from foreign words occurring in the work alluded to, in consequence of the barbarous style of the Author's or Editor's Orthography; that I believed that by the word *Seraffin* the author meant Ashrafi; but as, notwithstanding the elaborate work of Abu'l Fazl, there was considerable doubt regarding some points connected with the currency of India in Akbar's time, I promised to make enquiry on the subject. Enquiry, however, has resulted in little more than a strong confirmation of the opinions I expressed in this room a few months back, regarding the very great danger of too general an application of the Roman alphabet to oriental languages. It would be impossible, I think, to find a better illustration of the mischief that might result, if the Romanizing principle were carried beyond its legitimate limits, than is contained in this work, one short passage of which I will read to the meeting.

“ ‘*Garcias ab Horto* writes, that ‘The Mogors had possessed the kingdome of Delly: but a certaine Bengalan (rebellling against his master) slue him, usurped his state, and by force of warre added this of Canara also to his dominion; he was called *Xabolam*. This king made his sister's sonne his successor, who was much addicted to Forreiners. He divided his kingdome into twelve parts, or Provinces, over which he set so many captains: *Idalcam* from *Angidaua* to *Cifarda*; from thence to *Negatona*, *Nizamaluco*; over *Balaguete*, or the up-hill country (for *Bala* in the Persian language signifieth, the toppe, and *Guete* a hill), *Imadmaluco*, and *Catalmaluco*, and *Verido*, &c. These all rebelled, and captured *Daquem* their King at *Beder*, the chief citie of *Decan*, and shared his Kingdome amongst themselves and some Gentiles, partners in the conspiracie. They were all forreiners but *Nizamaluca*. This and the other names before mentioned, were Titles of Honour, given them with their offices by the king, corrupted by the vulgar in pronouncing. *Idalcam* is *Adel-ham*; *Adel* in the Persian language, signifieth Justice; *Ham* is the Tartarian appellation, signifying a Prince, or King (which name might well be the reliques of the Tartarian conquests in those parts), so *Adel-ham* is *king of justice*. *Neza* in the Persian (which *Scaliger* saith is of like extent in the East, as *Latine* in the West) is a Lance; *Maluco* signi-

fieth the Kingdome. *Neza* or *Nizamaluco*, the speare or lance of the kingdome. So, *Cotamaluco*, the Tower of the kingdome. *Imadmaluco* the Throne of the kingdome, &c. *Nizamaluco* is also called *Nizamoxa*, which *xa* or *scha* is a Persian title (signifying as *Monsieur* in France, *Don* in Spaine), and given by *Ismael* the Sophi and *Tamas* his sonne to all those kings that would communicate in their sect, which *Nizamoxa* only yielded to. Other of them made shew, but soone recanted. Thus farre *Garcias*.'

“Now here we have an intelligent, and certainly an honest traveller, rendering his narrative, as far as the identification of proper names is concerned, not only almost wholly unintelligible, but leading himself into the commission of serious etymological blunders. By *Nizamaluco* no doubt is meant *Nizam al-Mulk*. This to the present day is a popular error for *Nazim al-Mulk*, a title meaning administrator, or a country governor of a kingdom, and frequently applied to the emperor's *Naibs* or Viceroyes. The other titles I assume to be, *Adil Khan*, *Imad al-Mulk*, *Kutb al-Mulk*, *Nizam-Shah*. To the last mentioned, *Verido*, no oriental word that I am acquainted with will approximate. I fully concur in all that is said regarding the advantages that would result from reducing the number of alphabets in which we now find the languages of the world written; and if efforts are confined to unlettered languages, or those which have little or no original literature, probably no harm would result from making the attempt. If, again, the numerous alphabets of cognate languages could be reverted to the existing form of their original type, or that form of the same family of languages which had received the highest development, while in one sense it would be a retrogression, in another it would be an *immense* stride in advance. But if we were seeking for it, we could not, perhaps, find a more forcible illustration of the mischievous effects which I fear, as those who think with me fear, would follow the general adoption of a principle which, I cannot but think, when it came to be practically applied, would prove wholly impracticable.

“But to return to our *Seraffins*. I can find no such word in any oriental history, nor any nearer approach to it than that which, I before mentioned I believe it to represent—*viz.*, the *ashrafi*, which I may mention is itself etymologically a word of some obscurity. Abu'l Fazl has given very detailed information about the mints and coins of

Akbar. I am inclined to doubt if it can be entirely relied on. He gives a very long list of gold and silver coins as current. On four of these (the chozal, weighing 3 tolahs and  $5\frac{1}{2}$  ratis, Rs. 30; the *aftábe*, 1 tolah 2 mashas  $4\frac{3}{4}$  ratis, Rs. 12; the *Illahi*, 12 mashas  $1\frac{1}{2}$  ratis, Rs. 10; and the *Adl Gutkah*, 11 mashas, Rs. 9.)—Mr. Thomas has based some calculations. The rupee, Abu'l Fazl states, was first introduced by Shir Shah, and maintained in his currency by Akbar, who it is stated raised the standard, a statement which experiment will bear out. The currency of the Mohammadan Sovereigns of India, as a matter of antiquarian research, is of considerable interest to those who are studying this subject; but at the present time, when the question of a gold currency for India is being discussed, there is a point connected with it which, if this Society could throw any light on, would be of some practical importance. I allude to the value of silver expressed in gold, 250 years ago. Mr. Thomas, assuming the accuracy of Abu'l Fazl's statements, and on the basis of some calculations made by Colonel W. Anderson, has stated the relative values of gold and silver in Akbar's time to have been as 1 to 9.4. But I am unable to verify the data to be found in Abu'l Fazl, and here Purchas' statement, that an ashrafi, or *Seraffin* as he called it, was worth only Rs. 10, is of some value. I find no gold coin of Akbar's existing that will fit most of the coins described by Abu'l Fazl. Marsden figures 7 of Akbar's gold coins, five averaging  $166\frac{1}{2}$  grains, and two 188 grains. Prinsep gives three, one weighing 159, another 174, and the third 186 grains. Dr. Shekleton, the assay master of the Calcutta Mint, who takes much interest in enquiries of the kind, and who is at present engaged in the preparation of some tables in continuation and amplification of Prinsep's, which will be of much value, has very kindly given me the weight of some thirty Shir Shahi and Akbari rupees from the rapidly formed but large collection of Colonel Guthrie, who has promised a further supply of gold coins for the same purpose. In forwarding the *data*, Dr. Shekleton says:—'I agree with you that Abu'l Fazl's coins and their par of exchange are hardly reliable: 9.4 to 1 is a relative value of gold to silver which never could really have existed;' and he adds:—'None of the silver coins are pure *absolutely*; they are about 16 Br., or 98.333 per cent. of pure metal. This, however, is termed pure by the native refiners, as their process does not admit of

a higher quality of refinance. 'Pure,' therefore, with reference to native coins, means that they contain no purposely added alloy.

'The average weight of all the Akbars is grs. 168.432.

'The value of 10 in Indian Rupees (present currency) is Rupees 10-0-7 at 16 Br.

'The average weight of the Shir Shah Rupees is grs. 167-13-3.

'Value of 10, in Indian Rupees, is Rupees 9-15-7, at 16 Br., showing that 10 Rupees of either Akbar or Shir Shah's coinage are about equal in value to 10 Rupees, present currency.'

"From the earliest times the current coins of all Mohammedan sovereigns have been the *dinár*, or gold denarius; the *dirhem*, or silver drachma; and the copper *fals*, or, as it is more generally used in the plural, *falus*. The word *dinár*, is a word of considerable historical importance, as it has given rise to certain chronological speculations by no means of small interest. It is used in an inscription of Chandra Gupta's date, as if the coin were then current; but it occurs very much earlier in Hindoo shasters prior to the time of Panini, who it is supposed lived in the fourth century B. C. It is mentioned, however, in early Sanskrit literature as an ornament only, and would appear to have been worn round the neck, several being strung together, separated by coral or other beads, in a manner similar to the necklaces of gold mohurs we see every day worn by the natives around us. The ancient Sanskrit Grammarians endeavoured to derive the word from Sanskrit roots; but there is no doubt that it is the Roman *denarius*, although that coin was of silver. The *dirhem* is the Greek *drachma*. Our cabinets of Bactrian coins furnish us with numerous specimens of drachmas, didrachmas, and tetradrachmas.

"The *falus* is the obolus. Akbar adopted the rupee of Shir Shah, and, if we are to put faith in Abu'l Fazl, paid great attention to the standard of his coins. Still, all the silver coins of his mints I have had tested differ somewhat in weight, some as much as 10 grains. The average of eleven, however, gives a coin as nearly as possible equal in weight to the Company's Rupee. The basis of his currency was the *dam*. Abu'l Fazl says that one of Akbar's rupees exchanged for forty of these dams, and this statement has helped Mr. Thomas; but I think some further investigation with the help of the coins themselves is desirable, before we accept so very low a value for gold in the reign of Akbar."



Mr. Blanford asked Captain Lees if he could inform the meeting of the origin of the application of the term *sovereign* to the coin.

Captain Lees replied that he had no doubt that the origin of the application of *sovereign* in England to gold coins of the realm was similar to that of the *Napoleon* and *louis d'or* to gold coins in France, and *Frederic d'or* to gold coins in Prussia. As to the word itself, its English orthography is so barbarous as to conceal its origin. The correct word is *suveran*, French *souverain*, for the Latin *supernus*, or, more nearly, the Italian *sovrano*; and it is a very singular coincidence, (but I may add that I attach to it only the singularity of a coincidence,) that in ancient Hindu literature gold and gold coin is most usually mentioned under this very term *suverna*; or if we drop the inherent final vowel, as is usual in the vernaculars, we shall have precisely the word the origin of which we are in search of, *suvern*.

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LIBRARY.

The following additions have been made to the Library since the meeting held in July last.

*Presentations.*

\* \* \* *The names of donors in capitals.*

Verhandlungen des Zoologisch-botanischen Vereins in Wien, Jahr 1855—62, Vols. V. to XII.—THE ZOOLOGICO-BOTANIC SOCIETY OF VIENNA.

Bericht über die Oesterreichische Literatur der Zoologie, Botanik und Palaeontologie, aus den Jahren 1850, 1851, 1852, 1853.—THE SAME.

Personen- Orts- und Sach Register der Wiener K. K. Zoologisch-botanischen Gesellschaft, 1851—55 and 1856—1860.—THE SAME.

Nachträge zu Maly's *Enumeratio plantarum phanerogamicarum Imperii Austriaci Universi*, von A. Neilreich.—THE SAME.

Separat-abdruck naturwissenschaftlicher Abhandlungen aus den Schriften des Zoologisch-botanischen Vereins in Wien.—THE SAME.

Festkranz zur zweiten Jahresfeier des Zoologisch-botanischen Vereins.—THE SAME.

Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften, Methematisch—Naturwissenschaftliche Classe, Band XLVI. abth. I.

Nos. 6 to 10; Band XLVII, abth. I, Nos. 1 to 3; Band XLVI, abth. II, Nos. 8 to 10—Band XLVII, abth. II, Nos. 1 to 4;—Philosophisch-Historische classe—Band XL, Heft 3, 4 and 5; Band XLI, Heft 1 und 2.—THE IMPERIAL ACADEMY.

Register zu den Bänden 31 bis 40 der Sitzungsberichte der Philosophisch-Historischen classe der K. Akademie der Wissenschaften, Vol. IV.—THE SAME.

Archiv für Kunde Oesterreichischer Geschichts-Quellen; Band XXVIII, Zweite Hälfte, und Band XXIX. Erste und Zweite Hälfte.—THE SAME.

Fontes Rerum Austriacarum, Oesterreichische Geschichts-Quellen, Band V, abth. I; Band XXII, abth. II.—THE SAME.

Denkschriften der K. Akademie der Wissenschaften, Mathematisch-Naturwissenschaftliche classe, Band. XXI.—THE SAME.

Physicalische Verhältnisse und Vertheilung der Organismen im Quarnerischen Golfe, von Dr. J. R. Lorenz.—THE SAME.

Mémoires de L'Académie Impériale des Sciences, Belles-Lettres et Arts, de Lyon—Classe des Lettres, Tomes IX. and X.—Classe des Sciences, Tomes X. XI. and XII.—THE ACADEMY.

Annales des Sciences Physiques et d'Industrie, de Lyon, Vols. II. to VI. 3rd Series.—THE SAME.

Abhandlungen der Akad. d. Wissenschaften zu Berlin, aus dem Jahre 1862.—THE PRUSSIAN ACADEMY.

Monatsberichte der K. Preuss. Akademie der Wissenschaften zu Berlin, aus dem Jahre 1863.—THE SAME.

Memorie della Reale Accademia delle Scienze di Torino, Serie Seconda, Tomo XX. 1863.—THE ROYAL ACADEMY OF SCIENCE OF TURIN.

Proceedings of the Royal Society of Edinburgh, Session 1862-63, Vol. 5 No. 59.—THE SOCIETY.

Abhandlungen der Mathemat.-Physikalischen classe der königlich Bayerischen Akademie der Wissenschaften. Neunten Bandes, dritte abtheilung.—THE ROYAL BAVARIAN ACADEMY.

Sitzungsberichte der Königl. bayer. Akademie der Wissenschaften zu München; 1862, Band II, Heft 2—4; 1863, Band I, Heft 1 and 2.—THE SAME.

Denkrede auf Joh. Andreas Wagner, von Dr. Carl Friedrich Philipp von Martius.—THE SAME.

Ueber die Deutschen Einheitsbestrebungen im 16 Jahrhundert, von dem Konigl. Universitäts-Professor Dr. Cornelius.—THE SAME.

Rede in der öffentlichen Sitzung der K. Akademie der Wissenschaften am 28 März 1863, von Justus Freiherrn von Liebig.—THE SAME.

Ueber die Stellung und Bedeutung der pathologischen Anatomie, von Dr. L. Buhl, München, 1863.—THE SAME.

Zapiski Imperatorskago Russkago Geographikeskago Obstestva, 1862, knizka, I., II., and IV. and 1863, knizka I. and II.—THE IMPERIAL ACADEMY OF ST. PETERSBURGH.

Otketö Imperatorskoï Publiknoi Biblioteki za 1860 Godô to 1862 Godô.—THE SAME.

Geographikesko—Statistikeskiï Slovaré Rossiiskoi Imperii, Tomö I.—THE SAME.

Catalogue des Manuscrits et Xylographes Orientaux de la Bibliothèque Impériale Publique de St. Petersburg, 1852.—THE SAME.

Ein Beitrag zur Deutschen Literatur aus Russland, der Universität Jena; Lavater's Briefe an die Kaiserin Maria Feodorowna.—THE SAME.

Guide de la Bibliothèque Impériale Publique de St. Pétersbourg, 1860.—THE SAME.

Wegweiser der Kaiserlich Oeffentlichen Bibliothek zu St. Petersburg.—THE SAME.

Réglement pour les visiteurs de la Bibliothèque Impériale Publique de St. Pétersbourg, 1852.—THE SAME.

Les Elzevir de la Bibliothèque Impériale Publique de St. Petersburg, 1862.—THE SAME.

Catalogue des publications de la Bibliothèque Impériale Publique de St. Petersburg.—THE SAME.

Catalogus codicum Bibliothecae Imperialis Publicae Graecorum et Latinorum, Fasciculus Primus—Codices Graeci.—THE SAME.

Putevoditel po imperatorskoi publicnoi bibliotek.—THE SAME.

Chronologiceskaya Rospis Slavienskich Knig, by I. Karatayeb.—THE SAME.

Pravila dla posietitelei imperatorskoi publicnoi biblioteki.—THE SAME.

Deciatilietie Imperatorskoi publicnoi biblioteki, 1849-1859.—THE SAME.

Address of the President of the Linnean Society of London, delivered May 25th, 1863, and May 24th, 1864.—THE SOCIETY.

List of the Linnean Society for 1863.—THE SAME.

The Annals of Indian Administration, Vol. VIII, Part 2.—THE BENGAL GOVERNMENT.

Journal of the Statistical Society of London, Vol. XXVII, Part 2, with a list of its Fellows in 1863.—THE SOCIETY.

Journal of the Agri-Horticultural Society of India, Vol. XIII, Part 3.—THE SOCIETY.

Journal Asiatique, Vol. III, Nos. 10 and 11.—THE ASIATIC SOCIETY OF PARIS.

Proceedings of the Royal Society of London; Vol. XIII, Nos. 64 to 67.—THE ROYAL SOCIETY.

Rahasya Sandarbha; Vol. II, Nos. 14 and 15.—THE CALCUTTA SCHOOL BOOK SOCIETY.

Bijdragen tot de Taal-land-en Volkenkunde van Nederlandsch Indië; Vol. VII, Stuk 4 and 5; and Vol. VIII, Stuk I.—THE UNIVERSITY OF LEYDEN.

Transactions of the Linnean Society of London, Vol. XXIV, Part 2.—THE SOCIETY.

Journal of the Linnean Society of London—Zoology; Vol. VII, Nos. 27 and 28, and Vol. VIII, No. 29.—Botany; Vol. VII, Nos. 27 and 28, and Vol. VIII, No. 29.—THE SOCIETY.

The Calcutta Christian Observer, Vol. XXV, Nos. 296 and 297.—THE EDITOR.

Philosophical Transactions of the Royal Society of London, Vol. CLIII, Parts 1 and 2, with a list of its Fellows.—THE SOCIETY.

Memoirs of the Geological Survey of India (Palæontologia Indica), Vol. III, Part 4.—THE BENGAL GOVERNMENT.

Proceedings of the Scientific Society of Ghazeeepore, No. 5 of 1864.—THE SOCIETY.

The Calcutta Review, No. 78.—THE EDITOR.

The Oriental Baptist, Nos. 211 to 214 of Vol. XVIII.—THE EDITOR.

Selections from the Records of the Madras Government, No. 77.—THE MADRAS GOVERNMENT.

Returns showing the operation of the Income Tax Act in the N. W. Provinces for 1862-63.—THE GOVERNMENT N. W. PROVINCES.

Calcutta Christian Intelligencer, Vol. XXXIX, Parts 7 to 10.—  
THE EDITOR.

Journal of the Chemical Society of London, Vol. II, for April, May  
and June 1864.—THE SOCIETY.

Journal of Sacred Literature and Biblical Record, Vol. V, No. 10.—  
THE EDITOR.

Annales Musei Botanici Lugduno-Batavi, By F. A. Guil. Miguel,  
Tome I, Fasc. IV to VIII.—THE LUGDUNO-BATAVIAN ACADEMY.

Proceedings of the Royal Geographical Society of London, Nos. 4  
and 5 of Vol. VIII.—THE SOCIETY.

The Anthropological Review and Journal, Vol. II, No. 5.—THE  
ANTHROPOLOGICAL SOCIETY.

Professional papers on Indian Engineering, Vol. I, No. 4.— MAJOR  
J. G. MEDLEY.

Purána Sangraha, Part 14.— BABU KALI PROSONNO SINGH.

Selections from the Records of the Government of India, Public  
Works Department, Nos. 42 to 45.—THE GOVERNMENT OF INDIA.

Memoirs of the Geological Survey of India, Vol. III, Part 2 and  
Vol. IV, Part 2.—THE BENGAL GOVERNMENT.

Quarterly Journal of the Geological Society of London, Vol. XX,  
No. 79.—THE SOCIETY.

Statistics of the Trade of the port of Calcutta, Parts 3 and 4 with  
supplements to Parts 1 and 2, compiled by W. W. J. Wood, Esq.—  
THE COMPILER.

Annual Report of the Insane Asylums in Bengal for 1863, by J.  
McClelland, Esq.— THE BENGAL GOVERNMENT.

A Geographical, Statistical and General Report on the district of  
Hazareebaugh, by Capt. H. Thompson, Revenue Survey, from 1858-59,  
to 1862-63.—THE SAME.

Zeitschrift der Deutschen Morgenländischen Gesellschaft, Vol.  
XVIII, Part 3.—THE SOCIETY.

Annual Report with Tabular Statements for the year 1863 on the  
condition and management of the Jails in the N. W. Provinces, by Dr.  
Walker.—THE GOVERNMENT N. W. PROVINCES.

Proceedings of the Royal Irish Academy, Vol. VII, Parts 1 to 6.—  
THE ACADEMY.

Transactions of the Royal Irish Academy, Vol. XXIV, Part 1, Anti-

quities; Part 2, Polite Literature; and Part 3, Sciences.—THE SAME.

Report on the Survey operations of the Lower Provinces for 1862-63  
THE BENGAL GOVERNMENT.

General Report on the Revenue Survey operations of the Bengal  
Presidency for 1861-62 and 1862-63.—THE GOVERNMENT OF INDIA.

Ditto ditto, another copy.—THE SURVEYOR GENERAL OF INDIA.

Report of the Commissioners appointed to enquire into the Sanitary  
state of the Army in India with precis of evidence, for 1863.—THE  
BENGAL GOVERNMENT.

Selections from the Records of the Government N. W. Provinces,  
Part XL.—THE GOVERNMENT N. W. PROVINCES.

Madras Journal of Literature and Science, Third Series, No. 1.—  
THE MADRAS LITERARY SOCIETY.

Memoirs of the Royal Astronomical Society of London, Vol. 31.—  
THE SOCIETY.

Geological Magazine, No. 1 of 1864.—THE EDITOR.

Journal of the American Oriental Society, Vol. VIII, No. 1.—  
THE SOCIETY.

The Agra Law Journal, embracing original dissertations on legal  
subjects, with select Civil, Criminal and miscellaneous decisions and  
circular orders Vol. I, No. 1.—THE COMPILER.

Report on the Police of the Town of Calcutta and its suburbs for  
1863-64.—THE GOVERNMENT OF BENGAL.

Nukata Mirza Bedil.—JWALA NATH PUNDIT.

Khumsat al Mujahis.—THE SAME.

Shahnameh in Urdu.—THE SAME.

Seh Nusura Zahuri and Diwan Shahi.—THE SAME.

Baharistan of Jami.—THE SAME.

Nufhatool Imun.—THE SAME.

Shir O'Shucker.—THE SAME.

Akhlak i Nasiri.—THE SAME.

Abu'l Fazl, Part 2nd.—THE SAME.

Abwabool Jinan.—THE SAME.

Siraj ul Loghat.—THE SAME.

Gulistan, with notes.—THE SAME.

Moonsha Talibeen.—THE SAME.

Marcaza adwar.—THE SAME.

Nuzarat ul Sindh.—THE SAME.

Byaz, Nos. 1 to 5.—THE SAME.

Arabic and Urdu Grammar.—THE SAME.

Akhlak i Jallali.—THE SAME.

Ayjaza Khusrowie.—THE SAME.

Timur Nameh.—THE SAME.

Preface to Anwar Suhili with notes; also an abridgement of the Grammar of the Urdu Language.—THE SAME.

Hakikath i Bekhud.—THE SAME.

Zubboor of David.—THE SAME.

Furhunga Farsee.—THE SAME.

Cards containing hymns of Gods and Goddesses in Small Devanāgri characters embodied in the names of the Gods and Goddesses in large Devanagri characters.—THE SAME.

Sketches of the Colony of Sierra Leone and its inhabitants, by R. Clark.—THE AUTHOR.

The degree of uncertainty which local attraction, if not allowed for, occasions in the operations of Geodesy, by Archdeacon J. H. Pratt.—THE AUTHOR.

Lectures on the Science of Language, 2nd Series, by Professor Max Müller.—THE AUTHOR.

The Sunnyassee, letters and tales, by J. Hutchinson, Esq.—THE AUTHOR.

A Collection of Treaties, Engagements and Sunnuds, relating to India and the neighbouring countries, Vol. IV; compiled by C. U. Aitchison, Esq.—THE GOVERNMENT OF INDIA.

Arringhe officiose dell'avvocato Giambattista Dattino.—THE AUTHOR.

Abhandlung über die grosse Karthagische und andere neu-entdeckte Phönikische Inschriften, von H. Ewald.—THE AUTHOR.

The Gospel for the Afghans, by Capt. H. G. Raverty, 2 copies.—THE AUTHOR.

#### *Exchanges.*

The Athenæum for May, June, July and August, 1864.

The Philosophical Magazine and Journal of Science, Vol. XXVII, Nos. 184, 185; and Vol. XXVIII, Nos. 186 to 188.

*Purchases.*

- The Annals and Magazine of Natural History, Nos. 78 to 81.  
 Comptes Rendus de l'Academie des Sciences, Nos. 18 to 26 of Vol. LVIII, and Nos. 1 to 7 of Vol. LIX.  
 The Edinburgh Review, Vol. CXX, No. 245.  
 Journal des Savants for May, June, July and August, 1864.  
 The Quarterly Review, Vol. CXVI, No. 231.  
 Revue des Deux Mondes for 15th May, June, July, August, and 1st September, 1864.  
 Revue et Magasin de Zoologie, Vol. XVI, Nos. 4 to 7.  
 The Westminster Review, New Series, Vol. XXVI, No. 51.  
 The Natural History Review, Vol. III, No. 15.  
 Numismatic Chronicle and Journal of the Numismatic Society, No. 14.  
 The Ibis, a magazine of general ornithology, Vol. VI, Nos. 21 and 22.  
 Journal of Entomology, descriptive and Geographical, Vol. I, Nos. 1 to 9.  
 Orient und Occident, Vol. II, Part IV, herausgegeben von Th. Benfey.  
 History of Modern Architecture, by J. Fergusson.  
 An Essay on the origin and formation of the Romance Languages, by Sir G. C. Lewis.  
 Buddhism in Thibet, with an Atlas of Plates, by E. Schlagintweit.  
 Dictionnaire Classique, Sanscrit-Francaise, Part 3.  
 Histoire Naturelle des Insectes. Genera des Coléoptères, par M. Th. Lacordaire, Vols. I. to VI. with plates.  
 Hewitson's Exotic Butterflies, Part 51.  
 Indische Spruche, Sanskrit und Deutsch, Vol. II, by Otto Bohtlingk.  
 Sanskrit Wörterbuch, by Otto Bohtlingk and R. Roth, Vol. IV. Nos. 26 and 27.  
 Atlas Ichthyologique des Indes Orientales Neerlandaises, by M. P. Bleeker, 14 Livraison.  
 Le Mahá-bhárata, poème épique de Krishna-Dwaipáyana, par Hippolyte Fauche, Vols. I and II.  
 Memoires d'Histoire et Geographie Orientales, by M. J. Goeje, No. 3.  
 Dictionnaire Turc-Arabe-Persan. Heft VII, by Dr. J. T. Zenker.  
 Ibn-el-Athiri, edited by C. J. Tornberg, Vol. X.



Portraits of the Game and Wild Animals of Southern Africa, by Captain W. C. Harris.

The Birds of India, by Dr. T. C. Jerdon, Vol. III., 2 copies.

Deutsches Wörterbuch, von Jacob Grimm, und Wilhelm Grimm, Vol. V. Part I.

LALGOPAL DUTT.

2nd November, 1864.



FOR DECEMBER, 1864.

The monthly General Meeting of the Asiatic Society of Bengal was held on the 7th instant.

Colonel R. Strachey, senior member present, in the chair.

The minutes of the last Meeting were read and confirmed.

Mr. Oldham desired to correct a misapprehension which had taken place in the report of what he had said at the Meeting in December last. He said that Dr. Gerard had sent a collection to Mr. Buckland and the Asiatic Society had sent one also, and that Dr. Gerard's was the first;—not that Dr. Gerard's collection reached home before the collection sent from Calcutta. Professor Phillips with characteristic caution had left the matter where he found it.

Mr. Blanford reminded the Meeting that, on the occasion referred to, he had reduced the argument of the validity of the Oxford fossils as affording evidence of the authenticity of the disputed specimens in the Society's Museum to one crucial question, viz., "Could it be proved by a comparison of dates, that Dr. Buckland's fossils reached England before the Society's collection reached Calcutta?" To this question he, and he believed others at the Meeting, had understood Mr. Oldham to reply that he had not his notes with him at the time, but he knew that he had notes of the dates required, and that they shewed that Dr. Gerard's fossils could not have been sent from the Society's Museum. Mr. Blanford still thought that it would aid the settlement of this question if Mr. Oldham would place his notes upon record in the Society's proceedings.

Mr. Oldham replied that he had some notes, but he declined to produce them.

Mr. Blanford remarked that in that case the whole matter remained

exactly where it was before Mr. Oldham made his attack upon his (Mr. Blanford's) paper on the Spiti Fossils.

Dr. Stoliczka mentioned that Mr. Schlagintweit has described from Gnari-Khorsum an Ammonite, viz., *Ammonites Kobelli*, which is very analogous to *A. bifrons*, so much so, that the one might be taken for the other; that both the species or varieties, as they may be called, exist in the Society's collection; and that it would be desirable to know whether the same are represented in the Oxford collections.

Mr. Blanford remarked that, though the species might be similar, the peculiarity of the supposed Gerard Fossils was in the absolute identity of their mineral character with that of the Whitby fossils; moreover, the abundance of the same species at Spiti and Whitby, and the absence at Spiti of other fossils having the same mineral character, but not specifically identical with Whitby fossils.

Colonel Strachey made some remarks tending to throw doubt on the authenticity of the disputed Gerard fossils.

The following presentations were announced:—

1. From W. Cornish, Esq. a specimen of the Black-backed Goose (*Sarkidiornis melanonotus*.)

2. From Lieutenant R. C. Beavan; two specimens of *Dendrocitta rufa*.

3. From Dr. F. Stoliczka; a specimen of *Lagomys Curzoniae*.

4. From Baboo Rajendra Mullick; two specimens of *Goura Coronata*, or crowned Pigeon; five specimens of Wild Ducks, a Flamingo, and a black Lemur.

5. From A. C. L. Carlyle, Esq., Officiating Curator; three specimens of Bats: one *Nycticejus canus*, and two of a species of *Scotophilus*, Calcutta.

6. From Baboo Poorno Chunder Bysack, Assistant Curator; several specimens of young Rats.

7. From Lieutenant R. C. Beavan; three books, viz., "England's Workshops;" "The Utilization of Minute Life," and another work.

8. From the Government of India, Foreign Department; two copies of a series of Photographic likenesses of the tribes of Nepal, taken by Captain Taylor.

The Officiating Curator exhibited the skeletons of a large Crocodile and a Frog, *Rana Brahma*, prepared for the Museum.

A letter from Major A. B. Johnson, intimating his desire to withdraw from the Society, was recorded.

The Secretary read the following copy of a letter from the Secretary of State for India, sanctioning the transfer to Government of the Museum of the Asiatic Society of Bengal; forwarded by the Under-Secretary to the Government of India, Home Department:—

“India Office, London, 15th October 1864. Public.

No. 79.

“His Excellency the Right Hon’ble the Governor General of India in Council.

“SIR,—I have received and considered in Council your letter dated 27th June (No. 35) 1864; and I have in reply to communicate my sanction to the proposals therein submitted for the transfer to Government of the Museum of the Asiatic Society of Bengal, and for the formation of an Imperial Museum at Calcutta.

“2. I shall take immediate steps in accordance with your request for the selection of a competent Curator for the Museum, on the terms proposed by you, together with the allowance of one hundred and fifty pounds (£150) as passage and outfit money.

I have, &c.,

(Sd.) C. WOOD.”

No. 5870.

“Copy forwarded to the Secretary to the Asiatic Society, Calcutta, with reference to correspondence ending with his letter No. 177, dated 5th April 1864.

“By order,

(Sd.) “A. COLVIN,

“*Officiating Under-Secy. to the Govt. of India.*”

The Council reported that, having received a letter from the officiating Curator requesting that his resignation, as announced to the last Meeting of the Society, might be withdrawn, they had allowed Mr. Carlyle to defer his resignation to the end of the current month (December), about or shortly after which time the Curator appointed by the Secretary of State may be expected to arrive.

The following gentlemen, duly proposed at the previous Meeting, were balloted for as Ordinary Members:—

W. Anderson, Esq.	Whitley Stokes, Esq.
H. Dunlop, Esq.	R. J. Richardson, Esq.
J. C. Sarkies, Esq.	E. S. Robertson, Esq.
D. R. Onslow, Esq.	E. T. Atkinson, Esq.
J. H. A. Branson, Esq.	

The following gentlemen were named for ballot as Ordinary Members at the ensuing Meeting.

Lieutenant J. H. Urquhart, R. E., proposed by Captain Godwin Austen, seconded by H. F. Blanford, Esq.

Dr. J. Anderson, proposed by Dr. Partridge, seconded by W. L. Heeley, Esq.

The receipt of the following Communications was announced:—

1. From Baboo Gopee Nauth Sen; an abstract of the Hourly Meteorological Observations taken at the Surveyor General's Office in September last.

2. From Dr. Stoliczka; a note on *Lagomys Curzoniæ* Hodgson.

The Secretary read Dr. Stoliczka's paper, of which the following is an abstract:—During a late visit to Eastern Ladak, Dr. Stoliczka had succeeded in procuring several specimens of this animal, one of which had been prepared for the Society's Museum, and was exhibited on the table of the meeting room. Although occurring plentifully in Ladak, this was the first specimen that had reached the Society's Museum. After a detailed description of specimens of different age, &c., and noting the differences which characterized young and adult specimens, Dr. Stoliczka gives an account of the habitat of the species. It does not live usually at a less elevation than 15,500 ft. above the sea. Round the Chomoriri lake it is associated with *Phaiomys lucurus* and *Arctomys bobac*. The greatest elevation at which Dr. Stoliczka met with it was 18,672 ft., at the top of the Ladak pass, on the confines of vegetation. Between 15,500 ft. and at the latter elevation, it is very abundant throughout Ladak, and it appears to range far to the Eastward, as Mr. Hodgson obtained specimens from Chumbi, N. W. of Sikkim. Dr. Stoliczka had not observed it south of the Bara Lacha range. In Spiti *L. Curzoniæ* is represented by another species, *L. Roylei*, which ranges between 12,500 and 16,000 ft.

On the motion of the Chairman, the thanks of the meeting were voted to Dr. Stoliczka.

The Secretary read the following report of the Meteorological Committee of the Society, prefaced by an Introductory Memorandum; also a letter from the Government of India, Military Department, and the resolution of the Council thereupon.

#### INTRODUCTORY MEMORANDUM.

The Meteorological Committee of the Society, as it at present exists, was formed on the proposition of Colonel Strachey in April 1857, apparently in the expectation that, as a deliberative body, it would superintend the Collection of Meteorological observations, acting, to quote the words of the original Memorandum, "as a controlling power capable of combining the work of all observers."

There are no records of any work having been done by the Committee up to February 1861, when the offer of some self-registering instruments to the Society gave rise to a discussion, which resulted in the resolution, "That it is not desirable for the Society itself to attempt to make Meteorological observations, but that the Council should be recommended to address Government generally, on the importance of establishing a uniform system of Meteorological Observation throughout India, so managed as to admit of proper comparison; and on the means which should be adopted to bring about improvements in existing registers; and generally to further the accurate investigation of Meteorological phenomena." At a subsequent meeting of the Committee in April 1862, Colonel Strachey submitted the draft of a Report in accordance with the above Resolution, and this with slight alterations was sent up to the Council, and laid before the Meeting of the Society in May 1862.

In this report, after pointing out the great importance of a knowledge of Meteorological laws, and the direct influence of Meteorological Phenomena on life, health, and property, and adducing the drought and consequent famine of the previous year, as a prominent instance in support of their view, it was shewn that the present system of Meteorological Observation and record is totally inadequate to afford the data requisite for the elucidation of the laws of the climate, or for enabling us to avail ourselves of them even were they known; that while many of the records, now kept, are made with no sufficient

attention, and are not susceptible of comparison one with the other, from the very different ways in which they are kept, the value of the whole is very much diminished if not altogether lost, owing to the impossibility of distinguishing the good from the bad. It was further observed that the very essence of the value of such observations is, that they should be brought in relation one with the other, and that this must be done in a regular, systematic, and scientific manner. It was therefore suggested that a Board of the leading scientific men in India should be appointed by Government to make suggestions on this and kindred subjects; and it was conceived that the suggestions of a Board so constituted would be received with thankfulness by Government and all individual observers, and that such recommendations would practically carry with them sufficient weight, to give that spirit and unity of method to all meteorological observation which is so entirely wanting at present, and which is so essential to any real progress in the science and its practical application. The Council, in presenting this report, requested the authority of the Society to address Government in accordance therewith; which authority, after an interesting and animated discussion, was formally accorded.

A letter, dated 20th June 1862, was therefore addressed to Government, recommending that a Meteorological Committee should be constituted by Government, on the plan of the Meteorological Committee of the Board of Trade in London, for the advancement of Meteorological Science. In this letter the special importance of Meteorological information in this country was strongly insisted on. "The terrific hurricanes that from time to time have swept over the Sea of Bengal, causing the most calamitous destruction of property in shipping, and carrying death almost to the entire population of whole districts that have been submerged by the storm-wave," were quoted as well-known facts; and it was predicted (a prediction the disastrous fulfilment of which is fresh in the recollection of us all), that such storms would surely be repeated in the future. The horrors of the famine of the previous year, and the importance of any knowledge that would enable us to foresee those terrible calamities, were appealed to as strong arguments for systematic reform of the existing inefficient machinery, and as an instance of the interest which the Government has in the effects of Meteorological phenomena. Other arrangements of a similar

character, and tending to the same end, were also adduced; and finally the Council stated that they would be prepared to submit a definite plan without loss of time, should the general views they had expressed be approved by His Excellency the Governor General in Council.

The reply of Government to this letter was received in February 1863. The Government intimated that it fully recognized the value of Meteorological observations properly conducted and collated by persons really competent to the task, and that it would afford all reasonable assistance, if a scheme can be devised likely to effect the object desired by the Asiatic Society. Further, the Government would be glad to receive and take into consideration the definite proposals of the Society, concluding that the nature of the observations, and the forms of recording them, will be proposed by the Society with a due regard to the circumstances under which, and the persons by whom, they may have in many cases to be conducted, and also to the great importance of ensuring as far as possible that they *may be relied on as accurate.*

This letter being referred to the Meteorological Committee, the preparation of a draft Report was entrusted to Colonel Strachey, on his intimation that he had a detailed scheme of operations which he wished to recommend to the Society.

Colonel Strachey's draft was received in April 1864, but in the interim, *viz.*, in November 1863, a *memo.* was received from the Military Department, intimating that the Government would be glad to be favoured with an early reply to the previous letter.

On the receipt of Colonel Strachey's draft it was at once circulated to the Committee, and a number of alterations were suggested, which, retaining the fundamental propositions of Colonel Strachey's draft, were embodied in a second draft, for circulation to the absent members of the Committee, and others, not members of the Committee, but whose suggestions might, it was thought, be useful to the end in view. It was desired to obtain the fullest expression of opinion on the part of those, who, from their scientific acquirements or their special interest in Meteorology, might be in a position to give important aid to the Committee; and the Draft, as agreed upon by the resident members of the Committee, was therefore printed with half margin, and circulated as already mentioned. To these circulars a

number of answers and comments were received, the majority being in full accordance with the terms of the report. These were circulated to the resident members of the Committee, and a meeting was then held, (on the 22nd August,) at which the whole Report was reconsidered, and some slight alterations agreed upon. The Report thus completed was sent up to the Council, and recorded at the meeting held on the 2nd September; but as it was thought desirable that a subject of so much importance should receive the leisurely consideration of the Council, it was ordered to be circulated to the Council, and to be reconsidered at the following meeting. The chief alteration suggested by the Council was, that that part of the Draft which provided for a Board of Meteorology should be struck out, on the ground that the essential requirements of the system were efficient administration, and that it would be undesirable to divide the responsibility between an executive Secretary and a deliberative Board. The report was therefore referred back to the Committee, recirculated and considered at two meetings, and in its final revised form is now submitted by the Council at this meeting of the Society.

At the time when these lengthened deliberations were approaching completion, *viz.*, on the 19th October, a letter was received from the Military Department, informing the Society, that "in consequence of a further communication from the Right Hon'ble the Secretary of State, transmitting some suggestions of the War Department, the Governor-General in Council has decided to entrust the consideration of the question to the Sanitary Commission, and does not therefore consider it necessary to trouble the Society any further in the matter. His Excellency desired, however, to convey the acknowledgments of Government to the Asiatic Society for their original offer, and for the trouble they are believed to have taken preparatory to carrying it out." On receipt of this letter, it was decided that the Report be completed as originally intended, and that its submission to the Society be deferred for a month, in order that, should any further information be received respecting this most unexpected communication, it might be submitted to the meeting, together with the Report and the Government letter.

No further communication has been received, and the Report is therefore now submitted to the Society, together with all correspondence relating thereto.

The following letter was then read:—



No. 280.

## MILITARY DEPARTMENT.

*To the Secretary to the Asiatic Society.*

SIR,—With reference to the office Memo. from this Dept. No. 226, dated 11th November 1863, requesting an early reply to a previous communication relative to the offer of the Asiatic Society to submit a scheme for systematically conducting and recording Meteorological Observations in India, I am directed to acquaint you that, in consequence of a further communication from the Right Hon'ble the Secretary of State, transmitting some suggestions of the War Department, the Right Hon'ble the Governor General in Council has decided to entrust the consideration of the question to the Sanitary Commission, and does not therefore consider it necessary to trouble the Society any further in the matter.

His Excellency in Council, however, desires me to convey the acknowledgments of Government to the Asiatic Society for their original offer, and for the trouble they are believed to have taken preparatory to carrying it out.

I am, &amp;c.,

(Sd.) H. K. BURNE, *Captain,*  
*Offg. Secy. to the Govt. of India.*

## REPORT OF THE METEOROLOGICAL COMMITTEE.

In reporting upon the measures which, in the opinion of the Meteorological Committee, are essential to a sound and useful system of Meteorological registration, it must be premised that in Meteorology, as in all branches of physical science, accuracy of observation, and a clearly defined and rational aim, are indispensable to utility; and that, however desirable it may be that observations should be numerous, it is far better to limit them to any degree, than, by attempting to ensure fulness, to risk the accuracy and trust-worthiness of the record. Labour and money are equally thrown away upon any scheme which does not fulfil these all-important conditions.

That this proposition is true, when the object is purely to ascertain abstract laws, needs no argument; that it is equally true when the observations are made partly or chiefly with an economic or social object, is no less certain, though it may not at first sight be equally

apparent. The value of lunar tables to the seaman, that of a geological map to the miner, or of a chemical analysis to the manufacturer, depends upon their respective trustworthiness. If they cannot be trusted they are worthless; and the data, which it is the object of Meteorology to supply, in no way differ in this respect from those furnished by the Astronomer, the Geologist, or the Chemist. Among the more important indications of Meteorological data are the amount of rainfall, and the variation which this undergoes as cultivation increases or as forests are cleared; the causes of local and epidemic disease, which, although much wrapped in obscurity, may not improbably be in part dependent on the dampness of the atmosphere, the absence of ozone, the prevalence of particular winds, &c.; and the prognostication of storms, or of seasons of drought or unusual rainfall. Such phenomena are indeed only in a few cases capable of control, but it is only necessary to point to the results attained by Admiral Fitzroy, to prove that, when forewarned, we may be able in a great number of cases either to avoid or diminish their more disastrous effects. But in order that any of the laws of these phenomena may be determined, so that they may be acted upon with confidence, it is essential that the observations from which they are deduced be reliable and accurate. The observations of many successive years must, in most cases, be recorded, in order that the laws of recurring atmospheric changes, and the effects of those changes on agriculture, health, &c., may be ascertained, and the observations taken at different times and places must be capable of strict comparison. It is clear that no loose system of record will admit of this; and indeed the very knowledge that a series of observations had been made by an incompetent observer, or with instruments not strictly trustworthy, would at once be sufficient to warrant their rejection, when, as in Meteorology, the increments of variation are so small, that the error of observation will in many cases conceal or neutralize, if it does not absolutely invert, their true law of succession. Even if, at one and the same station, the conditions of error are so constant that a result true in the main is obtained, when the observation of different periods are compared, this will be the utmost attainable; and the observations are neither comparable with those taken under different conditions elsewhere, nor can they in any case be accepted with that confidence which alone will give them value,

when their indications are to be taken as the basis of active measures involving great interests. In truth, it may be stated as an invariable axiom, that scientific data which cannot be confidently accepted as trustworthy, are equally worthless to science and economics.

Strongly holding this view, the Meteorological Committee cannot recommend the adoption of any scheme which does not provide competent means of observation, and skilled and intelligent, in other words, special scientific supervision. They consider that in establishing a system of Meteorological registration for India, it may be wise not to aim at much detail, or at very extensive results at the outset, but it will be better to devote whatever sums the Government may grant for Meteorology, to provide a small but efficient staff, which may be extended in such manner and direction as experience may hereafter show to be advisable. It should be the duty of this staff, in the first place, to review the existing machinery of observation; to select and improve such parts as may be found capable of yielding useful results; and the rest should be strictly excluded from the Government official record as being only calculated to vitiate the general results if mixed up with more accurate data. When, by selection and careful supervision, a reliable system of record shall have been established, a Central Office will be necessary, at which the general results, furnished by the Local Officers of the staff, may be worked up into such a form as to render them available to Government and Foreign Meteorological bodies; and in the interim the whole system should be under the control of a skilled and trustworthy officer.

The general scheme which the Committee would therefore recommend, consists of the following parts:—

1st.—A Superintendent.

2nd.—Local Reporters, one to each of the seven Governments of India.

3rd.—Local observers, to be selected from those now existing, and others, who should be furnished with compared instruments and instructions to ensure uniformity of results.

The appointment, duties, and emoluments of each of these may be treated somewhat more in detail.

The Superintendent would be the sole responsible officer, to whose intelligence and scientific knowledge the formation and administration

of the entire system would be entrusted, and would be the immediate superior of the local Reporters. His duties would be to issue instructions as to the local Officers, to superintend the comparison and distribution of instruments, and their repair when necessary. He would carry on all correspondence with the Government and local Officers, and would receive all local reports, from which he would undertake the preparation of maps and such general reductions of the results of the department as would bring them into a form readily available to Government and the public, for general application. He would also place himself in communication with the Meteorological Departments of England and other countries, with a view to the exchange of Meteorological data, and in order that European Science might avail itself of the undoubtedly valuable additions which systematic observations in an inter-tropical country, possessing features so marked and varied as those of India, cannot fail to afford. These duties would demand much scientific knowledge and administrative capacity; and indeed the success of the system must, in a great measure, depend on the efficiency of this Officer. It would probably not be practicable to obtain a person qualified for the post at any salary below 1,000 Rupees per mensem, with travelling expenses and office allowance superadded. The appointment of some such officer is, it is considered, an essential part of any useful scheme of Meteorological registration, and the greatest care should be exercised in the selection of a person for the post.

The local Reporters, of whom one to each Government would probably prove sufficient at the outset, need not, it is considered, be Officers appointed exclusively to Meteorological work. It would be highly desirable that they should possess something beyond a mere empirical knowledge of Meteorology, and should be at least well acquainted with those portions of physics and physical geography which most closely relate to Meteorological phenomena; and to secure such qualifications, either a high salary must be offered, or a more moderate salary as an addition to that drawn for some other appointment. The latter course would probably be preferred; the more readily, as a larger field of selection would in this way be secured. It is considered desirable that persons habitually devoted to the pursuit of abstract knowledge, such as, for instance, some of the Professors of the Government or other Colleges, should, as a rule, be preferred for these appointments.

The local Reporters should be carefully selected, and such a salary should be offered as would make it worth their while to devote time and care to the duties. If a very small remuneration be offered, it is scarcely probable that time and attention of more than equivalent value will be given; for Meteorological work, involving much tedious detail, does not present the same attractions to speculative minds, as are possessed by sciences of more immediate generalization. It is considered that Rs. 400 per mensem for pay and travelling expenses, and Rs. 100 for office, would be a just and moderate remuneration for the local Reporters. An annual report on the reduced and generalized results should be a *sine qua non*.

The local Reporters would, in the first place, be entrusted with the collection of all observations actually made by different Officers of Government; and from the whole would select such as, with improved appliances and systematisation, may be brought to that standard of accuracy which has been pointed out as a primary condition of value.

They would then see that the selected observers be furnished with properly compared instruments, and with instructions to enable them to conform to the general system adopted; and they would occasionally visit the observing stations, to ensure that the instructions issued are strictly observed.

They would also receive the tabulated results, and either reduce them to the standards of comparison, or, if too numerous to deal with themselves, forward them to the Central Office for that purpose; in the former case, they would send to the Central Reporter, copies of the reduced observations, together with the annual report on the general results, for the area of observation.

The observations now recorded under orders of Government may be classed under four heads, *viz.* :—those made at—

1st.—The Government Observatories at the Presidency stations. These are generally trustworthy, and made with standard instruments. It is proposed that the Central Observatories be placed under the superintendence of the local Reporters, and that special attention be directed to them in order that the observations there made may be used as standards of comparison. In certain cases, also, extension may be advantageously given to the observations, so that at all central stations the following classes of phenomena be recorded, by self-registering instruments wherever possible :—

Temperature of air and solar rays.

Atmospheric moisture.

Rain-fall.

Strength and direction of wind.

Clouds.

Atmospheric pressure.

Electrical condition of lower atmosphere.

Ozone.

Magnetic dip, variation and intensity.

*2nd.*—The observations made at the Government Hospitals. These are, it is believed, rarely trustworthy, and it would probably be found desirable to restrict the records to the larger stations; and unless special observers are appointed, to limit the observations to those at the known hours of maximum and minimum, restricting the instruments to the thermometer (dry bulb), barometer and rain-gauge. By thus limiting the number and kinds of observations, it would probably be found practicable to give them a value, which for the most part they cannot be considered to have at present.

*3rd.*—The observations recorded at Civil Stations, Prisons, and Police Stations. The majority of these are believed to have but little value, and the observers are rarely of sufficient education or intelligence to be entrusted with a register, in which accuracy cannot be ensured without constant intelligent supervision. There may be particular cases in which an educated Officer might take such interest in the subject of Meteorology that he would volunteer the superintendence of the observations. In this case, the offer might be accepted at the discretion of the local Reporter, and the requisite instruments furnished by Government. All such observers should be volunteers; it being unquestionable, that it is impolitic and disadvantageous to impose the duties of registration on those who take no personal interest in the work. At the discretion of the local Reporters, and with the approval of the Superintendent, a certain small allowance for writers should be made to observers of this class. Elsewhere, but little would probably be lost by the abandonment of this class of registers; if retained, they should be made for local record only, and should not be allowed to appear side by side with those of more value, upon which, such an association would only tend to throw discredit.

4th.—On Government ships. These are fairly trustworthy, and, with a little care and attention on the part of the Reporter, may probably be made more so. The barometrical observations so made are especially of value, and those on the direction of the wind; every encouragement should be given to the multiplication of this class of observations on the larger merchant ships and private steamers.

A fifth class of observations may be recorded with advantage when obtainable, *viz.*, those made by educated Planters, Engineers, and others scattered through the country, not in Government service. Though these may be few in number, in certain cases they will be of a value fully equal to those made at the Central Observatories. The Society now receives a series of observations of this character from a gentleman in Ceylon, which, for accuracy, care and fulness, are surpassed by none in the country. Should any registers of this class be obtainable, it would clearly be advisable to afford the observers furnishing them every aid in the loan or repair of instruments, the supply of forms of registers, &c.

The scheme thus submitted would involve an immediate maximum annual cost of about Rs. 67,000, including cost of instruments, office, travelling expenses for the Superintendent, &c., which may be divided as follows:—

	<i>Monthly.</i>
Secretary and Superintendent,.....	1,000
7 Local Reporters, at Rs. 500, .....	3,500
Central Office, Computers, &c., say .....	300
	<hr/> 4,800
	<hr/>
<i>Per annum</i> .....	57,600
Instruments, Printing, &c., say .....	10,000
	<hr/>
Total, per annum .....	67,600

The Committee believe that this scheme, without being very costly, would yield results which would amply compensate the expense. They would strongly urge as a general principle that any attempt to obtain Meteorological data on a cheap scale of payments will fail, as previous attempts have failed, and they believe that any expenditure

which is so incurred will prove a loss of money, entailing only disappointment on all who look to the registration of Indian Meteorology to give information of value in sanitation, agriculture, and the general administration of the country.

On the proposition of the Chairman, it was resolved that, seeing the small number of members present at the meeting, the discussion of the Meteorological report should be deferred till the next meeting.

